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10/663,282	09/16/2003	Yasuyuki Matsuya	5259-000031	3218

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EXAMINER	
BRINEY III, WALTER F	

ART UNIT	PAPER NUMBER
2614	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/663,282	MATSUYA, YASUYUKI	
	Examiner	Art Unit	
	WALTER F. BRINEY III	2614	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on 16 June 2008.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1 and 6-13 is/are pending in the application.

4a) Of the above claim(s) 6 and 7 is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1 and 8-13 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Restriction

Claims 6 and 7 remain withdrawn as directed to a non-elected invention.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1. Claims 1, 8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent 5,636,264 (patented 03 June 1997) ("*Sulavuori*") in view of Wiki 1, Wiki 2 and US Patent 4,829,299 (patented 09 May 1989) ("*Mandell*") and further in view of US Patent 5,347,587 (patented 13 September 1994) ("*Takahashi*").

Claim 1 is limited to a data communication method. The claimed method comprises five steps. By the instant amendment the first four steps are as originally filed. The fifth step is amended, eliminating the term "directly" and adding an "inverter." Concerning the preamble, the using step, the transmitting step and the receiving step, *Sulavuori* discloses a method of transmitting information (*Sulavuori* at col. 2 ll. 39-43); using a high level for digital "1" and a low level for digital "0" (*id.*), and using a return to zero pulse with a pulse width smaller than the pulse width of the NRZ signal to represent the high level (*id.* at fig.1, pulse P) and a low level to represent the low level (*see id.* at fig.1) (*id.* at col. 3 ll. 14-30); transmitting the signals as IR pulses (i.e., radio signals) (*id.*

at col. 3 ll. 3-7); and receiving the radio signals from the transmitting side (*id.* at col. 6 ll. 4-8).

The converting step requires, on a transmitting side, converting analog signals comprising voice or music or digital signals obtained by digitizing voice or music into non-return-to-zero digital signals formed by 1-bit data streams using a *noise shaping* method. *Sulavuori* discloses this step since *Sulavuori* discloses using a continuously variable slope delta ("CVSD") modulator to encode voice signals into a 1-bit data stream. *Id.* CVSD uses a leaky integrator in the feedback path. *See Wiki 2* ("Each input sample is compared to the reference sample. If the input sample is larger, the encoder...adds the step size to the reference sample. If the input sample is smaller, the encoder...subtracts the step size from the reference sample."). The use of a leaky integrator in a delta modulator's feedback path is known in the art to produce modulations resembling sigma-delta modulation. *Mandell* at col. 1 ll. 45-55. Since sigma-delta modulation performs noise-shaping as claimed and a CVSD modulator behaves as a sigma-delta modulator, a CVSD modulator also performs noise-shaping just as claimed. *Wiki 1* at § Noise shaping and 1 bit converters.

The driving step includes, on the receiving side, driving a musical sound output section by means of an inverter using electrical signals obtained from the received signals so as to convert the electrical signals into musical sound signals. Earphone 201 of *Sulavuori* is a speaker, so it converts electrical signals into sound just like the claimed musical sound output section. *Sulavuori* at col. 8 ll. 3-8. *Sulavuori* likewise discloses driving the earphone 201 with received signals to create music, but uses analog signals

from a speech decoding unit 216 instead of an inverter as claimed. *See id.* at col. 7 ll. 58-64, fig.4B. In this way, *Sulavuori* fails to anticipate the claimed step of driving a musical sound output section by means of an inverter using electrical signals. However, the prior art makes obvious this deficiency.

In particular, *Takahashi* discloses an invention entitled "Speaker Driving Device." *Takahashi* first discloses that the speaker driving method of *Sulavuori* is conventional in converting a digital sound into analog before application of the signal to a speaker. *Takahashi* at col. 1 ll. 11-18. Second, *Takahashi* teaches replacing this conventional sound reproduction method with a digital reproduction method that drives a speaker with a digital signal and with the combination of a buffer and an inverter. *Id.* at col. 6 ll. 63-68, col. 7 ll. 1-45, fig.3. (disclosing an inverter where the switch between contacts 11c and 11e applies voltage to coil winding 5b when the binary signal is zero). Therefore, one of ordinary skill in the art at the time of Applicant's invention would have found driving a musical sound output section by means of an inverter obvious since *Takahashi* discloses the use of an inverter for driving a speaker and because *Takahashi* teaches that the inverter is a suitable replacement for the conventional digital-to-analog conversion employed in *Sulavuori*. Therefore, *Sulavuori* in view of *Wiki 1*, in view of *Wiki 2* and further in view of *Mandell* and further in view of *Takahashi* makes obvious all limitations of the claim.

Claim 8 is limited to a data receiving apparatus. This claim comprises there elements: 1) a radio receiving section, 2) a musical sound output section and 3) a drive section. The radio receiving section receives by radio return-to-zero digital signals. The

signals are obtained by a) converting analog signals comprising voice or music or digital signals obtained by digitizing voice or music into non-return-to-zero digital signals formed by 1-bit data streams using a noise shaping method, b) using a high level for the non-return-to-zero digital signals of "1", c) using a low level for the non-return-to-zero digital signals of "0", d) converting the non-return-to-zero digital signals of a high level into return-to-zero signals having a pulse width smaller than the pulse width of the non-return-to-zero signals and e) outputting the non-return-to-zero digital signals of a low level as they are at a low level. Likewise, *Sulavuori* discloses a radio receiver (*Sulavuori* at fig.4B) that receives from a transmitting apparatus (*id.* at fig.4A) comprising: a speech encoding block 104 that performs 1-bit conversion and converts speech signals into a non-return-to-zero 1- bit data stream (*id.* at fig.1, waveform B) using CVSD (i.e., a noise shaping method) (*id.* at col.7, ll. 28-39; *also see* claim 1 *supra*) and a pulse shaper block 105 that creates return-to-zero signals by using a return to zero pulse to represent the high level (*id.* at fig.1, pulse P) and a low level to represent the low level (*id.* at fig.1).

Concerning the musical sound output section, *Sulavuori* discloses an earphone 201. *Id.* at fig.4B. Concerning the drive section, the drive section generates return-to-zero drive signals as the electrical signals to drive the musical sound output section by means of an inverter based on the return-to-zero digital signals received by the radio receiving section. A broad construction of the term musical sound output section allows for the inclusion of *Sulavuori* speech decoder 216, lowpass filter 217 and earphone 201. Indeed each of 216, 217 and 201 are necessary for converting electrical signals into music sound signals. Pulse stretching circuit 215 both stretches return-to-zero pulses and

drives speech decoder 216 with signal 42. *Id.* at col. 7 ll. 58-60, figs.1, 2 & 4B. Since pulse stretching circuit 215 stretches return-to-zero signals, directly drives decoder 216 and decoder 216 is part of a circuit corresponding to the claimed music sound output section, the pulse stretching circuit 215 corresponds to the claimed drive section, but uses analog signals from a speech decoding unit 216 instead of an inverter as claimed. *See id.* at col. 7 ll. 58-64, fig.4B. In this way, *Sulavuori* fails to anticipate the claimed step of driving a musical sound output section by means of an inverter using electrical signals. However, the prior art makes obvious this deficiency.

In particular, *Takahashi* discloses an invention entitled "Speaker Driving Device." *Takahashi* first discloses that the speaker driving method of *Sulavuori* is conventional in converting a digital sound into analog before application of the signal to a speaker. *Takahashi* at col. 1 ll. 11-18. Second, *Takahashi* teaches replacing this conventional sound reproduction method with a digital reproduction method that drives a speaker with a digital signal and with the combination of a buffer and an inverter. *Id.* at col. 6 ll. 63-68, col. 7 ll. 1-45, fig.3. (disclosing an inverter where the switch between contacts 11c and 11e applies voltage to coil winding 5b when the binary signal is zero). Therefore, one of ordinary skill in the art at the time of Applicant's invention would have found driving a musical sound output section by means of an inverter obvious since *Takahashi* discloses the use of an inverter for driving a speaker and because *Takahashi* teaches that the inverter is a suitable replacement for the conventional digital-to-analog conversion employed in *Sulavuori*. Therefore, *Sulavuori* in view of *Wiki 1*, in view of *Wiki 2* in view of *Mandell* and further in view of *Takahashi* makes obvious all limitations of the claim.

Claim 10 is rejected for the reasons presented in the Final Rejection at p. 3 (28 November 2007).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1, 8 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Sulavuori* in view of US Patent 5,276,764 (patented 4 January 1994) (herein *Dent*) and further in view of *Dent*.

Notwithstanding the rejection of these claims under 35 USC § 102(b), applicant's contention that CVSD does not perform noise shaping is obviated by the obviousness of replacing a CVSD modulator with a sigma-delta modulator that applicant admits performs noise shaping. Applicant Arguments at pp. 8-9 (27 February 2008).

Claim 1 is limited to a data communication method. This rejection analyzes the converting step and the driving step. All other claimed steps are rejected for the same reasons presented in the Final Rejection at p. 2 (28 November 2007). The converting step requires, on a transmitting side, converting analog signals comprising voice or music or digital signals obtained by digitizing voice or music into non-return-to-zero digital signals formed by 1-bit data streams using a *noise shaping* method. *Sulavuori* discloses using a continuously variable slope delta ("CVSD") modulator to encode voice signals into a 1-bit data stream. *Id.* Assuming *arguendo* applicant is correct that CVSD does not

perform noise shaping, using sigma-delta modulators for voice conversion instead of CVSD modulators was well known. For example, *Dent* teaches the use of both CVSD and sigma-delta modulators as equivalents and alternatives for the compression/expansion of analog signals into digital signals when the analog signal is voice for transmission. *See Dent* at col. 1 ll. 7-14, 38-42, col. 5 ll. 9-24, 39-50, col. 6 ll. 17-20. Therefore, one of ordinary skill in the art at the time of applicant's invention would have found replacing the CVSD modulator of the *Sulavuori* voice coder with a sigma-delta modulator according to *Dent* obvious since sigma-delta modulators are art recognized equivalents for coding voice signals.

The driving step includes, on the receiving side, driving a musical sound output section by means of an inverter using electrical signals obtained from the received signals so as to convert the electrical signals into musical sound signals. Earphone 201 of *Sulavuori* is a speaker, so it converts electrical signals into sound just like the claimed musical sound output section. *Sulavuori* at col. 8 ll. 3-8. *Sulavuori* likewise discloses driving the earphone 201 with received signals to create music, but uses analog signals from a speech decoding unit 216 instead of an inverter as claimed. *See id.* at col. 7 ll. 58-64, fig.4B. In this way, *Sulavuori* fails to anticipate the claimed step of driving a musical sound output section by means of an inverter using electrical signals. However, the prior art makes obvious this deficiency.

In particular, *Takahashi* discloses an invention entitled "Speaker Driving Device." *Takahashi* first discloses that the speaker driving method of *Sulavuori* is conventional in converting a digital sound into analog before application of the signal to a speaker.

Takahashi at col. 1 ll. 11-18. Second, *Takahashi* teaches replacing this conventional sound reproduction method with a digital reproduction method that drives a speaker with a digital signal and with the combination of a buffer and an inverter. *Id.* at col. 6 ll. 63-68, col. 7 ll. 1-45, fig.3. (disclosing an inverter where the switch between contacts 11c and 11e applies voltage to coil winding 5b when the binary signal is zero). Therefore, one of ordinary skill in the art at the time of Applicant's invention would have found driving a musical sound output section by means of an inverter obvious since *Takahashi* discloses the use of an inverter for driving a speaker and because *Takahashi* teaches that the inverter is a suitable replacement for the conventional digital-to-analog conversion employed in *Sulavuori*. Therefore, *Sulavuori* in view of *Dent* and further in view of *Takahashi* makes obvious all limitations of the claim.

Claim 8 is limited to a data transmitting apparatus. This rejection analyzes the drive section. This claim comprises there elements: 1) a radio receiving section, 2) a musical sound output section and 3) a drive section. The radio receiving section receives by radio return-to-zero digital signals. The signals are obtained by a) converting analog signals comprising voice or music or digital signals obtained by digitizing voice or music into non-return-to-zero digital signals formed by 1-bit data streams using a noise shaping method, b) using a high level for the non-return-to-zero digital signals of "1", c) using a low level for the non-return-to-zero digital signals of "0", d) converting the non-return-to-zero digital signals of a high level into return-to-zero signals having a pulse width smaller than the pulse width of the non-return-to-zero signals and e) outputting the non-return-to-zero digital signals of a low level as they are at a low level. Likewise,

Sulavuori discloses a radio receiver (*Sulavuori* at fig.4B) that receives from a transmitting apparatus (*id.* at fig.4A) comprising: a speech encoding block 104 that performs 1-bit conversion and converts speech signals into a non-return-to-zero 1- bit data stream (*id.* at fig.1, waveform B) using sigma-delta as taught by *Dent* (i.e., a noise shaping method) (*id.* at col.7, ll. 28-39; *also see* the 103 rejection of claim 1 *supra*) and a pulse shaper block 105 that creates return-to-zero signals by using a return to zero pulse to represent the high level (*id.* at fig.1, pulse P) and a low level to represent the low level (*id.* at fig.1).

Concerning the musical sound output section, *Sulavuori* discloses an earphone 201. *Id.* at fig.4B. Concerning the drive section, the drive section generates return-to-zero drive signals as the electrical signals to drive the musical sound output section by means of an inverter based on the return-to-zero digital signals received by the radio receiving section. A broad construction of the term musical sound output section allows for the inclusion of *Sulavuori* speech decoder 216, lowpass filter 217 and earphone 201. Indeed each of 216, 217 and 201 are necessary for converting electrical signals into music sound signals. Pulse stretching circuit 215 both stretches return-to-zero pulses and drives speech decoder 216 with signal 42. *Id.* at col. 7 ll. 58-60, figs.1, 2 & 4B. Since pulse stretching circuit 215 stretches return-to-zero signals, directly drives decoder 216 and decoder 216 is part of a circuit corresponding to the claimed music sound output section, the pulse stretching circuit 215 corresponds to the claimed drive section, but uses analog signals from a speech decoding unit 216 instead of an inverter as claimed. *See id.* at col. 7 ll. 58-64, fig.4B. In this way, *Sulavuori* fails to anticipate the claimed step of

driving a musical sound output section by means of an inverter using electrical signals. However, the prior art makes obvious this deficiency.

In particular, *Takahashi* discloses an invention entitled "Speaker Driving Device." *Takahashi* first discloses that the speaker driving method of *Sulavuori* is conventional in converting a digital sound into analog before application of the signal to a speaker. *Takahashi* at col. 1 ll. 11-18. Second, *Takahashi* teaches replacing this conventional sound reproduction method with a digital reproduction method that drives a speaker with a digital signal and with the combination of a buffer and an inverter. *Id.* at col. 6 ll. 63-68, col. 7 ll. 1-45, fig.3. (disclosing an inverter where the switch between contacts 11c and 11e applies voltage to coil winding 5b when the binary signal is zero). Therefore, one of ordinary skill in the art at the time of Applicant's invention would have found driving a musical sound output section by means of an inverter obvious since *Takahashi* discloses the use of an inverter for driving a speaker and because *Takahashi* teaches that the inverter is a suitable replacement for the conventional digital-to-analog conversion employed in *Sulavuori*. Therefore, *Sulavuori* in view of *Wiki 1*, in view of *Wiki 2* in view of *Mandell* and further in view of *Takahashi* makes obvious all limitations of the claim.

Claim 10 is rejected for the reasons presented in the Final Rejection at p. 3 (28 November 2007).

3. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Sulavuori* in view of admitted prior art. These claims are simultaneously rejected under 35 U.S.C. 103(a) in further view of *Dent*.

The following rejection(s) are based on the 35 U.S.C. 102(b) rejection of claim 2, but equally apply *mutatis mutandis* to the 35 U.S.C. 103(a) rejection of claim 2.

Regarding **Claim 9**, as shown above apropos of Claim 8, Sulavuori anticipates all elements except use of the physical layers of Fast IrDA physical layer digital infrared communication standard. As applicant admits in the claim, the physical layers of Fast IrDA is a physical layer digital infrared communication standard. Sulavuori discloses a digital infrared communication interface. One skilled in the art would have known that use of a standard interface facilitates design and availability of components and insures operability. It would have been obvious to one skilled in the art at the time of the invention to apply the standard physical layers of Fast IrDA to the transmitter taught by Sulavuori for the purpose of realizing the aforesaid advantages.

4. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Sulavuori* in view of any one of *Law* (US Patent 6,064,699), *Smith III et al.* (US Patent 4,627,090) or *Dean et al.* (US Patent 5,008,964). This claim is simultaneously rejected under 35 U.S.C. 103(a) in further view of *Dent*.

The following rejection(s) are based on the 35 U.S.C. 102(b) rejection of claim 2, but equally apply *mutatis mutandis* to the 35 U.S.C. 103(a) rejection of claim 2.

Regarding **Claim 11**, Sulavuori further discloses a low-pass filter 217 that filters the decoded speech signals before reproduction by earphone 201. Therefore, Sulavuori

anticipates all elements except a high pass filter that removes a DC component. Law discloses a CVSD demodulator (Fig. 12C) with a capacitor C11 that corresponds to the high pass filter claimed and removes a DC component in the input to amplifier 270 (column 7, lines 57-62). Smith discloses a CVSD demodulator (Fig. 2) with capacitors (output of amplifier in 500 and input of loudspeaker 560) that correspond to the high pass filter claimed and remove a DC component in the input to amplifier 104 and loudspeaker 44. Dean discloses a CVSD demodulator (Fig. 3C) with capacitors (Fig. 7, output of 100 and between 104 and 44) that correspond to the high pass filter claimed and remove a DC component in the input to amplifier 104 and loudspeaker 44. One skilled in the art would have known that such an arrangement optimizes the dynamic range of the amplifier and loudspeaker. As such, it would have been obvious to one skilled in the art at the time of the invention to apply the high-pass filtering capacitor taught by any one of Law, Smith or Dean to the receiver taught by Sulavuori for the purpose of realizing the aforesaid advantage.

5. Claims 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Sulavuori* in view of any one of *Law, Smith or Dean* and further in view of *Hamasaki et al.* (US Patent 5,815,051) and *Quintus et al.* (US Patent 4,833,418). These claims are simultaneously rejected under 35 U.S.C. 103(a) in further view of *Dent*.

The following rejection(s) are based on the 35 U.S.C. 102(b) rejection of claim 2, but equally apply *mutatis mutandis* to the 35 U.S.C. 103(a) rejection of claim 2.

Regarding **Claims 12 and 13**, as shown above apropos of Claim 11, the combination of Sulavuori and any one of Law, Smith or Dean makes obvious all elements except the structure of the filters claimed. A low-pass filter disclosed in Quintus (Fig. 3, reference 150; column 5, lines 43-54) and a high-pass filter disclosed in Hamasaki (Fig. 16; column 8, lines 47-60) that combine to form the filter section claimed. At the time the invention was made, it would have been obvious to a person of ordinary skill in the art to use the filter structures of Quintus and Hamasaki in the combination made obvious by Sulavuori and any one of Law, Smith or Dean. Applicant has not disclosed that the particular filter structures claimed provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected applicant's invention to perform equally well with the filter structures taught by Quintus and Hamasaki in any relative disposition because the changing the relative position of cascaded passive filters does not affect the resultant characteristic. Therefore, it would have been obvious to one of ordinary skill in the art to modify the combination made obvious by Sulavuori and any one of Law, Smith or Dean to obtain the invention as specified in Claims 12 and 13.

Response to Arguments

Applicant's arguments filed 16 June 2008 have been fully considered but they are not persuasive. The applicant alleges that because none of the cited prior art discloses, teaches or suggests the use of an inverter that the instant claims are allowable. (Applicant Arguments at 8-9, 16 June 2008). However, this allegation is moot in view of the new grounds of rejection that establish the prima facie obviousness of the inverter.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to WALTER F. BRINEY III whose telephone number is (571) 272-7513. The examiner can normally be reached on M-F 8am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Curtis A. Kuntz can be reached on (571) 272-7499. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Walter F. Briney III/
Examiner
Art Unit 2614

10/16/08